

The Influence of Communication Channel Interactivity on Investors' Response to Managements' Linguistic Choices

ABSTRACT

More firms are now disseminating financial information via the internet, and digital technology allows firms to communicate in a more interactive manner compared to traditional paper-based communication channels. Further, various levels of interactivity exist even within online communication channels. We conduct an experiment to examine how online communication channel interactivity affects investor information processing, as evidenced by investors' reactions to managers' linguistic choices within financial disclosures, i.e., term specificity (*firm-specific* versus *general terms*) and language extremity (*moderately* versus *extremely positive language*). We find that a more interactive channel causes investors to be more sensitive to managers' linguistic choices, and there is an interactive effect of term specificity and language extremity on investment willingness. Specifically, when managers use moderately (extremely) positive language, investors are more (less) willing to invest in a company with its financial disclosures containing firm-specific (versus general) terms. However, such an interactive effect is much weaker when the communication channel is less interactive. Our findings are important for investors, managers, and regulators to understand how investors' perceptions and investment decisions could be changed when information is communicated via a more interactive channel.

INTRODUCTION

Firms are increasingly disseminating information via the internet, causing investors to rely more heavily on online communication channels to acquire financial information (e.g., Ettredge, Richardson, and Scholz 2002; Antweiler and Frank 2004; Blankespoor, Miller, and White 2014; Lerman 2017; Blankespoor 2018). Compared to more traditional communication modes (e.g. printed materials), online communication channels enable firms to provide richer and more interactive content to stakeholders, creating a more active experience for users (e.g., Hoffman and Novak 1996). With companies disseminating financial disclosures via various communication channels (e.g., firm investor relation websites, press releases, social media, and conference calls) and with different communication channels exhibiting different levels of interactivity, investors' processing of financial disclosures, and accordingly their decisions, may be affected. In this study, we examine whether and how online communication channel interactivity (hereafter, "channel interactivity") affects investors' processing of management's financial disclosures.

Understanding the influence of channel interactivity on investors' processing of management's financial disclosures is important because channel interactivity does not change information content and, thus, should not affect investors' perceptions and judgments. However, research suggests that more interactive channels increase users' attention to detail, because they are more cognitively stimulating (e.g., Reeves and Nass 2000; Kiss and Esch 2006; Sundar 2012). Hence, it is possible that if investors obtain financial disclosures from more interactive channels, it may cause investors to be more sensitive to details within the financial disclosures than they otherwise may be. One such

detail is management's linguistic style in qualitative disclosures, which has been shown to influence investors' judgments and decisions beyond quantitative information (e.g., Hales, Kuang, and Venkataraman 2011; Rennekamp 2012; Tan, Wang, and Zhou 2015; Asay, Elliott, Rennekamp 2016; Asay, Libby, and Rennekamp 2018a; Koonce, Leitter, and White 2018). We identify two linguistic choices that management uses in financial statement disclosures that have not received much attention in the literature – language extremity and term specificity – and investigate how channel interactivity influences investors' reactions to these two linguistic choices.

Language extremity refers to the strength of the descriptive words used without changing the underlying tone (e.g., Craig and Blankenship 2011).¹ In referring to language extremity, it can range from neutral (neither positive or negative) to moderate to extreme. For example, when management refers to a new product, they can use a number of adjectives that vary in extremity but all convey a positive tone, such as “our new *competitive* product” (moderately positive) versus “our new *exceptional* product” (extremely positive). Bochkay, Chava, and Hales (2018) find that there is variation in managers' language extremity choices in their communication with investors. Further, Bochkay et al. (2018) find that there is greater movement in stock prices and trading volume when extreme language is used within conference calls, suggesting that extreme language changes investor perceptions and generates disagreement among investors. However, it is unclear from Bochkay et al. (2018) *whether* and *when* investors are more

¹ Language extremity has historically been studied as one component of two larger linguistic constructs: intensity (e.g., Bowers 1963; Hamilton and Hunter 1998) and vividness (e.g., Hales et al. 2011). Recently, the literature breaks out language extremity by specifically looking at the linguistic components that magnify the extremity of the message without changing the emotionality of the message (Craig and Blankenship 2011).

convinced by the extremely positive language used in management disclosures.² One factor that could moderate a positive language extremity effect is term specificity.

Term specificity refers to the extent to which firm-specific terms are used in describing a product, such as using “iPhone” (high term specificity), compared to more general or generic terms, such as “cell phone” (low term specificity). Investors encounter wide variation in term specificity in financial information. For example, Nike uses firm-specific terms such as “Converse” and “Jordan Brand,” whereas Puma uses more generic terms such as “footwear” in their earnings releases (see Appendix A for more examples). Managers concurrently use both linguistic features (language extremity and term specificity) in financial disclosures, but their interactive effects on investors’ decision-making is unexplored and may not be intuitive to management.

We develop our hypotheses based on theory and prior research. Prior literature shows investors prefer more-detailed to less-detailed information (e.g., Hirst, Koonce, and Venkataraman 2007; Elliott, Rennekamp, and White 2015), as more-detailed information makes it easier for individuals to visualize the information (Semin and Fiedler 1988, 1991). Further, being able to visualize the information increases the believability of the message (Hansen and Wänke 2010). Thus, we predict that with moderately positive language (i.e. positive language but not to an extreme degree), investors will react more favorably when management uses firm-specific terms compared to general terms.

² Language extremity occurs within both positive and negative tones. In this study, we examine the effect of language extremity within a positive tone, as managers want to highlight positive performance in disclosures (Asay, Libby, and Rennekamp 2018b). Thus, managers are more likely to use extremely positive language to highlight favorable information and less likely to use extremely negative language to downplay unfavorable information (Bochkay et al. 2018).

Unlike moderately positive language, extremely positive language is likely to cause investors to question the validity of management disclosures (Craig and Blankenship 2011; Bochkay et al. 2018). As managers are motivated to portray firm performance opportunistically (e.g., Bernard and Skinner 1996; Bamber, Hui, and Yeung 2010), extreme positivity in the narrative could be perceived as supportive of, or consistent with, management's incentives (Tan, Wang, and Zhou 2014). Psychology research conjectures that when the validity of the information is questioned, individuals prefer less-detailed information to more-detailed information because the latter appears contrived (Johnson, Bush, and Mitchell 1998). Thus, we predict that investors will react more favorably to general terms (as opposed to firm-specific terms) when management concurrently uses extremely positive language in their disclosures.

Additionally, we expect that this effect of language extremity and term specificity will be moderated by channel interactivity. A more interactive channel requires additional sensory exchanges between the user and the content (e.g., Reeves and Nass 2000; Kiss and Esch 2006; Sundar 2012; Xu and Sundar 2016), increasing cognitive stimulation and leading to greater processing of information (e.g., Severin 1967; Braeshears, Akers, and Smith 2005). As a result, we expect investors will be more sensitive to linguistic features (and thus a stronger joint effect of language extremity and term specificity on investors' judgments) when investors access financial disclosures via a more interactive channel than a less interactive channel.

We conduct a $2 \times 2 \times 2$ between-participants experiment, manipulating channel interactivity (i.e., more or less interactive), term specificity within the earnings release (i.e., firm-specific or general terms), and language extremity within the earnings release

(i.e., moderately or extremely positive language). We use MBA students as proxies for nonprofessional investors. After reviewing background information of a fictitious firm, participants view the firm's online platform where we manipulate channel interactivity. Next, we inform participants that the firm just released its quarterly earnings, and we provide participants with the related earnings release, in which we include our term specificity and language extremity manipulations. Participants subsequently provide their willingness to invest in the firm and answer post-experimental questions.

Our findings are consistent with our predictions. We find that the joint effect of term specificity and language extremity on investors' investment willingness decisions is much stronger in the more (versus less) interactive channel condition. Specifically, in the more interactive channel condition, we find that when management uses moderately positive language, investors are more willing to invest in the firm when its disclosure contains firm-specific terms compared to general terms. However, when management uses extremely positive language, investors are more willing to invest in the firm when its disclosure contains general terms than firm-specific terms. Further, we find that the interaction effect of term specificity and language extremity in the more interactive channel condition is fully mediated by participants' credibility perceptions. In contrast, we find that investors do not react to managers' linguistic choices in the less interactive channel condition.

Our study contributes to the academic literature, regulation, and practice. First, we add to the emerging literature on how characteristics of communication channels influence investors' judgments. Interactivity has been identified as one of the main distinguishing features of online communication channels compared to traditional paper-

based media (Liu and Shrum 2002; Sundar 2012). Our study contributes to the literature by demonstrating that more interactive channels stimulate investors, making them more sensitive to management linguistic choices within financial disclosures disseminated through such channels. This suggests that when companies disseminate information via more interactive channels, managers need to be aware of such influences and deliberate on their disclosure decisions. Managers should be especially cognizant of their language choices as those choices may have a greater impact on investor judgments than they would otherwise have when financial disclosures are disseminated through a less interactive channel or traditional paper-based channels.

Further, our results add to the literature on term specificity and language extremity by demonstrating that the effect of term specificity is conditional on language extremity, and vice versa. Prior literature corroborates the SEC's guidelines that encourage managers to use more detailed, concrete terms whenever possible (e.g., SEC 1998; Elliott et al. 2015). While our results support such a recommendation when managers use moderately positive language in their disclosures, we also find a contrasting effect of term specificity (i.e., investors prefer general to firm-specific terms) when managers use extremely positive language in their disclosures. Additionally, our findings suggest that extremely positive language may result in stronger stock market reactions only when information is communicated via a more interactive channel and when general terms are used, but not otherwise. Managers and standard setters should be aware of the joint effect of language extremity and term specificity on investors' credibility assessments as well as their investment willingness judgments, as our results suggest that the use of firm-specific (versus general) terms could be considered as less

credible and decrease investment willingness when managers concurrently use extremely positive language and communicate via more interactive channels.

The remainder of this paper is organized as follows. Section II reviews relevant research and develops our hypotheses. Sections III and IV present our experimental design and results. Finally, section V offers conclusions and limitations to our study.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

With the development of digital technology, investors can now obtain financial information from online communication channels, such as websites, social media platforms, and discussion boards (e.g., Ettredge et al. 2002; Antweiler and Frank 2004; Blankespoor et al. 2014; Lerman 2017). The use of these online communication channels is now an important form of communication for firms, and an important channel for investors to obtain financial information (e.g., Blankespoor 2018).

Online communication channels change the way investors acquire and process information compared to traditional communication channels, such as paper-based mediums (Blankespoor et al. 2014). One of the main differences between traditional and online communication channels is the level of channel interactivity (e.g., Liu and Shrum 2002; Sundar 2012). Channel interactivity is a multi-dimensional construct that deals with attracting the user's attention and involving them in the flow of information (e.g., Sundar, Kalyanaraman, and Brown 2003; Chen and Yen 2004; Sundar 2012). Two key components of channel interactivity are vividness and involvement (e.g., Steuer 1992; Coyle and Thorson 2001; Sundar 2012).³ Vividness is the richness of the features in the

³ As channel interactivity is a multi-dimensional construct, the literature has investigated numerous dimensions and characteristics of interactivity such as playfulness, connectedness, choice, direction of communication, time flexibility, speed of interaction, and level of control (e.g., Liu and Shrum 2002; Chen

communication channel, which can be achieved through characteristics such as vibrant colors and animations (e.g., Drèze and Hussherr 2003; Goodrich 2011; de Vries, Grensler, and Leeflang 2012). Involvement refers to the use of features in the communication channel that allow users to actively engage with the communication channel. For example, a communication channel with a poll or a hyperlink is considered interactive as it provides user involvement and engagement (e.g., Fortin and Dholakia 2005). Also, the use of multiple senses (such as vision, audio, motion) enhances user involvement. This advancement in technology enables online communication channels to provide richer and more active experiences for users.

Variations in channel interactivity have the potential to influence investors' response to financial information obtained through these channels. More interactive channels increase the number of sensory exchanges between the user and the channel (e.g., Reeves and Nass 2000; Kiss and Esch 2006; Sundar 2012; Xu and Sundar 2016). Cue summation theory finds that an increase in sensory exchanges increases cognitive stimulation leading to greater learning of the content (e.g., Garner 1970; Severin 1968; Braeshears et al. 2005). For example, in education, more interactive lessons in the classroom increase students' stimulation, thus increasing their learning associated with the content (e.g., Rosegard and Wilson 2013). Additionally, a common strategy among presenters is to start with a "hook" to peak the audiences' interest (e.g., Willis 2006). This hook stimulates the audience allowing the presenter to hold the audiences' attention for the main presentation and increase their processing and learning of the information in the main presentation.

and Yen 2004; Downes and McMillan 2000; Ha and James 1998). We focus on two aspects of interactivity, vividness and involvement, which are recurring themes in the literature.

Additionally, persuasion literature suggests that individuals process information in more detail when they have high (opposed to low) involvement (Petty and Cacioppo 1986). For example, individuals are more likely to differentiate strong arguments from weak arguments when they are more involved with the issue than when they are not (Petty and Cacioppo 1986). Further, recent accounting findings suggest that the increased processing is persistent between tasks. Austin and Carpenter (2019) find that auditors who read a more engaging email (and thus are more involved) prior to performing audit test work are more likely to identify subtle fraud risks in the audit work papers compared to those who read a less engaging email. Thus, we expect more interactive communication channels will cause investors to be more engaged and involved in the information processing of financial disclosures.

Channel Interactivity and Linguistic Cues

Prior research finds a variety of non-numerical language choices influence investors' judgments and decisions (see Loughran and McDonald [2016] for a review). One such linguistic choice is managements' tone (e.g., Tan et al. 2014). Within messages with positive tone, managers can use different language to change the extremity of the tone. In fact, Bochkay et al. (2018) find there is variation in managers' language extremity choices in conference calls. Additionally, Bochkay et al. (2018) develop a linguistic extremity dictionary with "Level 1" words being moderately positive, or the least extreme, and "Level 5" words being extremely positive. For example, when management refers to a new product, they can use a number of adjectives that convey a positive tone but vary in extremity such as, "our new *competitive* product" versus "our new *exceptional* product". *Competitive* is rated on the bottom end of the positive tone

scale (Level 1) compared to *exceptional*, which is rated at the top end of the positive tone scale (Level 5).

When management uses moderately positive language in their disclosures, prior research suggests investors will prefer more detailed, concrete information to less detailed, abstract information (e.g., Hirst et al. 2007; Elliott et al. 2015). Compared to abstract terms, which refer to a greater set of possibilities, concrete terms refer to a more limited set of possibilities allowing for easier visualization of the information (Semin and Fiedler 1988, 1991). The ability to envision information influences receivers' perceptions of the information (Sedor 2002; Kadous, Krische, and Sedor 2006; Douglas and Sutton 2006; Wigboldus and Douglas 2007). For example, Sedor (2002) shows that analysts have more favorable forecasts when provided with scenario information that facilitates visualization than when information is presented in a bullet-point format. Hansen and Wänke (2010) also find that individuals perceive a message with concrete terms as more believable than a message with abstract terms because the concrete terms are easier to visualize. In our study, firm-specific terms more concretely refer to a unique item within the firm compared to general terms. Investors can visualize firm-specific terms when they process relevant information, leading to more favorable credibility assessments and, thus, greater investment willingness than with general terms.

Management also uses extremely positive language as they have incentives to report opportunistically (e.g., Bernard and Skinner 1996; Daniel, Hirshleifer, and Teoh 2002; Bamber et al. 2010; Bochkay et al. 2018). Extreme language magnifies the message tone and viewpoint conveyed to readers (Hamilton and Stewart 1993; Craig and Blankenship 2011). With an extremely positive worded financial disclosure, investors

may question the validity of the message, as positive language is consistent with managements' incentives to appear competent, successful, and optimistic about the future. Prior studies find that when disclosures are consistent with management incentives, investors may question the validity of the information (Lang and Lundholm 2000; Tan et al. 2014). Accordingly, when message validity is questioned, individuals are more likely to believe a message with less detailed information compared to a message with more detailed information (Johnson et al. 1998). Previous research conjectures this is due to more detailed information appearing contrived (Johnson et al. 1998). As such, investors may perceive extremely positive language with more detailed language as less believable than extremely positive language with less detailed language due to management trying to present an inaccurate representation of reality. Therefore, we predict that, when firms use extremely positive language, general terms will lead to higher investment willingness compared to firm-specific terms.

When financial disclosures are disseminated via a less interactive communication channel, prior research suggests investors will be less sensitive to details in the financial disclosures (e.g., Reeves and Nass 2000). As such, we expect investors will be less influenced by the language management uses in the financial disclosure. We predict with less channel interactivity, the joint effect of language extremity and term specificity on investors' investment willingness will be dampened compared to settings with more channel interactivity. This leads to our hypothesis, which is graphically presented in Figure 1.

Hypothesis: When provided with a firm’s financial performance information, investors are more willing to invest when firm management uses firm-specific terms (general terms) with moderately positive (extremely positive) language. This interactive effect is greater when the information is provided via a more interactive communication channel, versus a less interactive channel.

<INSERT FIGURE 1 HERE>

III. METHOD

Participants

Our participants are 227 MBA students from a large U.S. university who received extra credit in exchange for participating in the study. On average, the participants have 15.62 years of working experience and have taken 3.34 accounting and finance courses. Approximately 82.7 percent of our participants have stock investment experience, 80.9 percent have experience reading earnings releases, 80.4 percent have experience reading annual reports, and 36.3 percent are female. Our participants are good proxies for nonprofessional investors because they have similar characteristics and experience as those in Elliott, Hodge, Kennedy, and Pronk (2007).

Procedure

Participants assume the role of an investor and read background information (including historical financial data) for ABC Co., a hypothetical technology-manufacturing firm. Next, participants view the firm’s online platform, where we manipulate communication interactivity within six posts that relate to the firm and its products.⁴ After reviewing the online platform, participants are informed that ABC Co. just released third quarter earnings and view the most recent earnings release. We

⁴ To ensure all participants view the online platform, participants are required to enter a code provided on the bottom of the online platform page to continue the experiment in Qualtrics.

manipulate language extremity and term specificity within the earnings release. After reading the earnings release, we ask participants to indicate “To what extent are you willing to invest in ABC’s stock” on a scale from 0 (“Not at all Willing”) to 10 (“Very Willing”). Participants finish the experiment with post-experimental and demographic questions.

Experimental Design

We conduct a 2 (more versus less interactive channel) x 2 (firm-specific versus general terms) x 2 (moderately versus extremely positive language) between-participants experiment. In order to manipulate channel interactivity, we leverage prior research and focus on the vividness and involvement of the content on the platform (e.g., Sundar, Narayan, Obregon, and Uppal 1998; Reeves and Nass 2000; Sundar 2000; Sundar 2012). Vivid content is visually engaging, such as animations or videos (e.g., de Vries et al. 2012). Involving content is defined as the ability of the user to act on the content such as click a link, respond to a poll, or answer a question (e.g., Coursaris, Van Osch, and Balogh 2013). In the more interactive condition, we add one interactive feature to each post on the firm’s online platform. In the less interactive condition, the post just includes plain text. For example, one post is about the firm’s top three products chosen by consumers. In the more interactive condition, a poll is also included in the post. Participants can cast their vote for one of the three products.⁵ The poll provides an opportunity for the participant to respond, increasing the interactivity of the post. In the less interactive condition, the text was the only content included in the post. Another post describes one of the firm’s products, a high-speed processor, and jokes about how

⁵ In the experimental instrument, all features described as part of the more interactive manipulation are functional for the participant so that they can experience our channel interactivity manipulation.

everything in your life should not slow you down. In the less interactive condition, only the text description is shown. In the more interactive condition, in addition to the same text description in the less interactive condition, a video clip of a man stuck in traffic from a popular movie is also included in the post. The video is a dynamic, visually engaging feature, which increases the interactivity of the post. A third post provides information about telecommuting. In the more interactive condition, a snippet of information appears in the post and users are instructed to click the link to read the full article.⁶ By instructing the participant to click the link, this provides a directive for the participant to perform an action, increasing the interactivity of the post. In the less interactive condition, the linked content appears directly in the post. See Appendix B for additional manipulation examples.

We manipulate language extremity and term specificity within the earnings release. For language extremity, we hold constant the earnings numbers while only varying the adjectives used to describe the numbers. In all conditions, management's overall tone is positive, and we vary the extremity of the positive language. We utilize the language extremity dictionary developed in Bochkay et al. (2018) to design our manipulation. The dictionary in Bochkay et al. (2018) has extreme language ranked from 1 (moderate) to 5 (extreme) for both positive and negative valence language. Consistent with the categorization used in Bochkay et al. (2018), we use language from Categories 4 and 5 for our extremely positive language condition and Categories 1-3 for our moderately positive language condition. In the extremely positive language condition, management uses words such as "exceptional" and "superior". In the moderately positive

⁶ The information included in the article is not firm specific nor is it financially relevant so this should have no effect on participants' investment decisions in isolation.

condition, management uses descriptors such as “competitive” and “solid”. For example, the extremely positive language condition reads “ABC Co. Reports *Exceptional* Third Quarter Sales Growth” compared to the moderately positive condition that reads “ABC Co. Reports *Competitive* Third Quarter Sales Growth” (emphasis added).

Lastly, we manipulate the descriptive words management uses to refer to the products in the earnings release. In the general term condition, the earnings release contains generic terms that are applicable across companies: printer, graphics card, and processor. In contrast, in the firm-specific term condition, the earnings release contains firm-specific terms: CAD 870D, V-Force 320CT, and Quad Core X2. Only these three terms are manipulated, but they are repeated throughout the earnings release in reference to these products. Appendix C provides the earnings release with our term specificity and language extreme manipulations.

IV. RESULTS

Manipulation Checks

We checked the manipulation of channel interactivity by asking participants to indicate how stimulating the firm’s online platform is on a scale from -5 (“Not at all Stimulating”) to 5 (“Very Stimulating”). Participants in the more interactive condition were significantly more stimulated by the online platform content than those in the less interactive condition (means of -0.17 and -0.87, respectively, $t_{1,224} = 3.440$, $p < 0.033$, one-tailed), suggesting a successful manipulation.⁷

We test the effectiveness of the language extremity manipulation by having

⁷ All p-values are two-tailed unless specifically specified.

participants indicate how extreme the CEO is when referring to the firm's performance and products on a scale of -5 ("Very Unfavorable") to 5 ("Very Favorable"). As we manipulate language extremity within a positive tone, we expect participants to use the positive side of the scale. Consistent with the manipulation, all participants except six (out of 227) rate the language on the positive side of the scale indicating participants perceive the overall tone as positive.⁸ Additionally, participants in the extremely positive language condition rate the CEO's comments significantly more favorable than those in the moderately positive language condition (means of 3.75 and 3.01, respectively, $t_{1,225} = 12.296$, $p < 0.001$, one-tailed).

Finally, to ensure a successful manipulation of term specificity, we ask participants to indicate how specific the firm is in the earnings release when referring to their products with endpoints -5 ("Very General") to 5 ("Very Specific"). Participants in the firm-specific condition rate the firm to be more specific than those in the general condition (means of 2.40 and -0.28, respectively, $t_{1,225} = 55.118$, $p < 0.001$, one-tailed), indicating a successful manipulation of term specificity.

Tests of Hypothesis

Our hypothesis predicts that investors will prefer firm-specific terms when management uses moderately positive language, but they will prefer general terms when management uses extremely positive language. Additionally, we predict that investors will be less sensitive to management's linguistic choices in the earnings release when they are in the less interactive channel condition compared to when they are in the more interactive channel condition, suggesting a three-way interaction of channel interactivity,

⁸ We retain all participants in the analysis. However, results remain consistent if we drop these participants.

language extremity, and term specificity. We conduct an analysis of variance (ANOVA) for participants' investment willingness, with channel interactivity, language extremity, and term specificity as the independent variables. The results are shown in Table 1. Panel A shows the descriptive statistics of participants' investment decisions, and the ANOVA results are shown in Panel B. Figure 2 presents graphical results. Table 1 Panel B shows a significant three-way interaction ($F_{1,219} = 4.746$; $p = 0.030$), supporting H1.⁹

<INSERT FIGURE 2 AND TABLE 1 HERE>

To provide further support for H1, we analyze the joint effect of term specificity and language extremity in the more and less interactive channel conditions, respectively. We expect that with a more interactive channel, participants prefer firm-specific terms compared to general terms when management uses moderately positive language; however, when management uses extremely positive language, participants prefer general terms to firm-specific terms. Consistent with our prediction, as shown in Table 2 Panel A, the test for the predicted interaction of term specificity and language extremity in the more interactive channel condition is statistically significant ($F_{1,107} = 4.314$; $p = 0.040$).¹⁰ As shown in Table 2 Panel C, simple effects tests show that the results are in the direction predicted. Specifically, with moderately positive language, participants are more willing

⁹ As more interactive channels can increase individuals' affective responses, we also run this analysis including a post-experimental positive affect measure as a covariate. We ask participants to indicate the extent the company made them feel happy and pleased on a scale from 0 ("Not at All") to 10 ("Very Much"). We create a composite variable including both responses because they are highly correlated ($r = .909$, $p < .001$ and Cronbach's $\alpha = 0.952$). While the positive affect measure yields a significant result, the three-way interaction also remains significant after controlling for the affect measure. Thus, our results cannot be explained by positive affect.

¹⁰ We also test the interaction of *term specificity* \times *language extremity* in the more interactive condition using a contrast test with all eight cells. Using the traditional ANOVA interaction term weights, we assign contrast weights of (1, -1, -1, 1) to the following conditions within the more interactive condition: firm-specific and moderate, general and moderate, firm-specific and extreme, and general and extreme, respectively. Additionally, we assign zero weights to the less interactive condition. Results are consistent with the traditional ANOVA interaction term showing a significant interaction ($F_{1,219} = 4.520$, $p = 0.035$). The result is reported in Table 2 Panel B.

to invest when firm-specific terms are used compared to when general terms are used (mean = 6.27 and 5.52, respectively; $F_{1,219} = 1.868$, $p = 0.087$, one-tailed). Conversely, with extremely positive language, participants are more willing to invest when general terms are used compared to when firm-specific terms are used (mean = 6.93 and 6.04, respectively; $F_{1,219} = 2.693$, $p = 0.051$, one-tailed). These results are consistent with our predictions.

Additionally, as shown in Table 2 Panel D, we find that with general terms, there is a statistically significant difference between the moderately and extremely positive language conditions (mean = 5.52 and 6.93, respectively; $F_{1,219} = 6.985$, $p = 0.009$). This finding is consistent with Bochkay et al. (2018) that shows investors react stronger when extreme language is used than when moderate language is used. In contrast, with firm specific terms, we do not find a significant difference between the moderately and extremely positive language conditions (mean = 6.27 and 6.04, respectively; $F_{1,219} = 0.172$, $p = 0.679$). This result suggests that firm-specific terms could minimize the impact of language extremity on investors' reactions, establishing a boundary condition for the language extremity effect documented in Bochkay et al. (2018).

<INSERT TABLE 2 HERE>

In contrast, our hypothesis predicts the effects of language extremity and term specificity are smaller with a less interactive channel. Table 3 Panel A shows a non-significant interaction of term specificity and language extremity ($F_{1,112} = 0.931$; $p = 0.337$).¹¹ Additionally, as reported in Table 3 Panel C, when managers use moderately

¹¹ Similar to the more interactive condition, we also test the interaction of *term specificity* \times *language extremity* in the less interactive condition using a contrast test with all eight cells. Using the traditional ANOVA interaction term weights, we assign contrast weights of (1, -1, -1, 1) to the following conditions within the less interactive condition: firm-specific and moderate, general and moderate, firm-specific and

positive language, the simple effect of firm-specific terms and general terms is not significant (mean = 5.61 and 5.89, respectively; $F_{1,219} = 0.263$, $p = 0.609$). Further, when managers use extremely positive language, the simple effect of firm-specific terms and general terms is also not significant (mean = 6.40 and 5.97, respectively; $F_{1,219} = 0.687$, $p = 0.408$). Similarly, as tabulated in Table 3 Panel D, there is also no significant effect of language extremity when managers use general terms (mean = 5.89 and 5.97, respectively; $F_{1,219} = 0.022$, $p = 0.883$) or firm-specific terms (mean = 5.61 and 6.40, respectively; $F_{1,219} = 2.194$, $p = 0.140$). These results are consistent with our expectation that investors are less sensitive to managers' linguistic choices when they access management disclosures via a less interactive channel.

< INSERT TABLE 3 HERE >

Overall, these results support our prediction that the channel interactivity in which financial disclosures are released influences investors' processing, as evidenced by investors' responses to managements' linguistic choices within the financial disclosure. Specifically, investors have a stronger reaction to the linguistic choices when there is a more interactive channel compared to a less interactive channel.

Mediation Analysis

Our theory suggests that when management uses a more interactive channel, managements' linguistic choices will influence investors' investment decisions, which will be mediated by their credibility assessment, as illustrated in Figure 3. To capture management credibility, we ask participants to assess management's competence and

extreme, and general and extreme, respectively. Additionally, we assign zero weights to the more interactive condition. Results are consistent with the traditional ANOVA interaction term showing a non-significant interaction ($F_{1,219} = 0.888$, $p = 0.347$). The result is reported in Table 3 Panel B.

trustworthiness, on 11-point scales. Both questions are coded with “-5” indicating “not at all competent/trustworthy” and “5” indicating “very competent/trustworthy.” The reliability analysis shows the two measures are highly correlated ($r = .807$, $p < .001$ and Cronbach’s $\alpha = 0.906$). Thus, we use the average of participants’ responses to these two measures to capture their assessments of management credibility (Mercer 2004).

We conduct a three-way ANOVA for participants’ assessment of management credibility, with channel interactivity, language extremity, and term specificity as the independent variables. The descriptive statistics are shown in Table 4 Panel A, and the ANOVA results are shown in Table 4 Panel B. We find a marginally significant three-way interaction effect ($F_{1,217} = 2.862$; $p = 0.092$), which has a similar pattern as our main DV (i.e., investment willingness). Additionally, in the more interactive condition, we find a marginally significant two-way interaction effect of term specificity and language extremity ($F = 3.453$, $p = 0.065$).¹² In the less interactive condition, we find a non-significant two-way interaction effect of term specificity and language extremity ($F = 0.264$, $p = 0.608$).¹³

To test for mediation, we run Hayes’ PROCESS Model 8 for 1,000 bootstrapped confidence intervals for participants’ investment willingness in the more interactive condition (Preacher and Hayes 2008; Hayes 2009, 2013). We find that the overall model

¹² We test the interaction of *term specificity* \times *language extremity* in the more interactive condition using a contrast test with all eight cells. Using the traditional ANOVA interaction term weights, we assign contrast weights of (1, -1, -1, 1) to the following conditions within the more interactive condition: firm-specific and moderate, general and moderate, firm-specific and extreme, and general and extreme, respectively. Additionally, we assign zero weights to the less interactive condition.

¹³ Similar to the more interactive condition, we test the interaction of *term specificity* \times *language extremity* in the less interactive condition using a contrast test with all eight cells. Using the traditional ANOVA interaction term weights, we assign contrast weights of (1, -1, -1, 1) to the following conditions within the less interactive condition: firm-specific and moderate, general and moderate, firm-specific and extreme, and general and extreme, respectively. Additionally, we assign zero weights to the more interactive condition.

is fully mediated by participants' credibility assessments, as 90% of the confidence interval excludes zero (i.e., one-tailed bootstrapped estimates are < -0.156). As shown in Figure 3, the overall negative effect is a product of (1) the negative link between the interaction of *term specificity* \times *language extremity* and *credibility* ($a = -0.314$, $p = 0.036$) and (2) the positive link between *credibility* and *investment willingness* ($b = 0.658$, $p < 0.001$). Additionally, we find that the mediated path is in the predicted direction. We find a positive indirect effect of term specificity in the moderately positive language condition through credibility ($b = 0.249$, 90% of the confidence interval excludes zero, i.e., one-tailed bootstrapped estimates > 0.032). We also find a negative indirect effect of term specificity in the extremely positive language condition through credibility ($b = -0.164$, 90% of the confidence interval excludes zero, i.e., one-tailed bootstrapped estimates < 0.008). Further, the direct effect of the interaction of *term specificity* \times *language extremity* on *investment willingness* becomes insignificant after controlling for *credibility* ($b = -0.142$, $p = 0.389$), consistent with full mediation. Thus, consistent with our theory, the mediation results suggest that when investors access management disclosures via a more interactive channel, managers' linguistic choices will affect participants' credibility assessments, which in turn influence their investment willingness decisions.

< INSERT FIGURE 3 HERE >

V. CONCLUSION

Digital technology allows firms to communicate in a more interactive manner through online communication channels compared to traditional, paper based channels. Firms are increasingly using online communication channels to disseminate financial information. Hence, it is important to understand how channel interactivity influences

investors' sensitivity to financial information, and their investment decisions. As prior research finds investors are influenced by managements' linguistic choices, in this study, we examine how channel interactivity influences investors' information processing in response to two linguistic choices used by management: language extremity and term specificity. Our study finds that a more interactive communication channel causes investors to be more reactive to language in an earnings release compared to a less interactive communication channel. Specifically, we find that investors are more willing to invest with firm-specific terms, compared to general terms, when management uses moderately positive language. However, when management concurrently uses extremely positive language, investors are more willing to invest with general terms, compared to firm-specific terms. We find that these results are driven by investors' credibility assessments. There are no significant differences in investors' willingness to invest decisions based on language extremity or term specificity when management uses a less interactive communication channel.

We contribute to the literature on how characteristics of the online communication channel influence investors' decisions. Our study finds that more channel interactivity makes investors more sensitive to managements' linguistic choices within financial disclosures. This finding has implications for firms when disseminating information through more interactive channels as seemingly minor word choices may have significant effects on investors' decision-making. As online communication channels are become increasingly popular, our research suggests that managers need to be careful when making linguistic choices, as their choices may have greater impact on

investor reactions when investors access management disclosures through more interactive channels.

Our findings also contribute to the linguistic literature on language extremity. We find that in the more interactive channel condition, our results are consistent with archival research showing that extreme language in conference calls (i.e., a more interactive communication channel) affects investor judgment and decision-making (Bochkay et al. 2018), but only when management uses general language. We find that there is no language extremity effect when management uses firm-specific language even in the more interactive channel condition. More importantly, our findings in the less interactive channel condition suggest that the language extremity effect may not exist in a traditional paper-based financial reporting setting, establishing a boundary condition for the language extremity effect.

Further, this study also adds to our understanding on the impact of firm-specific language on investors' reactions. Our study shows a boundary condition to prior literature and the SEC handbook that establishes concrete terms are preferred to abstract terms. Our results show the effect of term specificity is moderated by language extremity. Specifically, investors prefer concrete terms when moderately positive language is used but prefer general terms when extremely positive language is used. Additionally, we provide evidence that such difference in investment willingness is driven by investors' credibility assessment. This has important implications for management in choosing the language used in disclosures, as our study shows concrete terms are not always the best choice.

As with most studies, this study is subject to limitations. First, we manipulate channel interactivity with the use of vivid and involving features within the online platform posts. While these two features are key components of interactivity, research suggests there are other aspects of interactivity that are influential on users such as the speed of interaction (e.g., Ariely 2000; Sundar and Wagner 2002). Future research can examine these other factors and their influence on investors. Additionally, in order to retain internal validity, our simplified communication channel interactivity manipulation may not reach the level of channel interactivity of actual online channel. While we believe that the effect of channel interactivity will magnify as channel interactivity increases, future research is needed to determine whether too much channel interactivity will result in a different effect.

APPENDIX A

Examples of Term Specificity within Earnings Releases

Panel A: Examples of Generic Terms

Puma discusses revenue related to footwear (i.e., general terms) within their Q1 2017 earnings release.



QUARTERLY STATEMENT Q1 2017

Strong Sales and EBIT growth in the First Quarter Upgrade of the Full-Year Guidance for 2017

Herzogenaurach, April 25, 2017

- Sales increase by 15% currency-adjusted to € 1,005 million (+18% reported), with all regions showing double-digit growth and Footwear being the main growth driver
- Gross profit margin improves slightly to 47.1%
- EBIT rises by 70% to € 70 million mainly due to strong sales development
- Net earnings and earnings per share increase by 92% to € 50 million and € 3.32, respectively
- Borussia Monchengladbach and Olympique de Marseille signed as of season 2018/19

UnderArmour discusses revenue related to footwear, apparel, and accessories (i.e., generic terms) within their Q1 2017 earnings release.

First Quarter Income Statement Highlights

- **Revenue** was up 7 percent to \$1.1 billion, driven by a 4 percent increase in wholesale revenue to \$773 million and a 13 percent increase in direct-to-consumer revenue to \$302 million. North American revenue declined 1 percent as new distribution was more than offset by the absence of business lost to bankruptcies in 2016. International revenue, which is comprised of our EMEA, Asia-Pacific, and Latin America regions, represented 20 percent of total revenue in the quarter, and was up 52 percent (up 57 percent currency neutral). By region, revenue was up 55 percent in EMEA, 60 percent in Asia-Pacific and 30 percent in Latin America. Apparel revenue increased 7 percent to \$715 million including strength in training, golf, and team sports. Footwear revenue grew 2 percent to \$270 million, against last year's same period which was up 64 percent due to significant strength in basketball sales and the timing of liquidations. Accessories revenue increased 12 percent to \$89 million with strength in men's training, running, youth, and global football.
- **Gross margin** was down 70 basis points to 45.2 percent as benefits from channel and product mix were offset by continued efforts to manage inventories appropriate to market demand.
- **Selling, general and administrative** expenses increased 12 percent to \$498 million, or 44.6 percent of revenue (up 210 basis points), due to continued investments in the direct-to-consumer, footwear and international businesses.
- **Operating income** was \$8 million. There was a **net loss** of \$2 million in the first quarter and a \$0.01 loss in **diluted earnings per share**.

APPENDIX A (continued)

Examples of Term Specificity within Earnings Releases

Panel B: Examples of Firm-Specific Terms

Nike specifically discusses revenue related to NIKE Brand, Jordan Brand, and Converse (i.e., firm-specific terms) within their Q1 2017 earnings release.

First Quarter Income Statement Review

- **Revenues** for NIKE, Inc. rose 8 percent to \$9.1 billion, up 10 percent on a currency-neutral basis.
 - Revenues for the NIKE Brand were \$8.5 billion, up 10 percent on a currency-neutral basis driven by double-digit growth in Greater China, Western Europe, Emerging Markets, Central & Eastern Europe and Japan, including strong growth in Sportswear, Running and the Jordan Brand.
 - Revenues for Converse were \$574 million, up 4 percent on a currency-neutral basis, mainly driven by growth in North America which was slightly offset by declines in Europe and Asia Pacific.
- **Gross margin** declined 200 basis points to 45.5 percent as higher average selling prices were more than offset by several temporary or discrete items including foreign exchange, a shift of expenses from Operating Overhead to Cost of Goods Sold, a higher off-price mix and the impact of exiting the Golf equipment business.
- **Selling and administrative expense** increased 12 percent to \$2.9 billion. Demand creation expense was \$1.0 billion, up 25 percent, reflecting investments in key sports events. Operating overhead expense increased 6 percent to \$1.9 billion, reflecting continued growth in the Direct-

Adidas specifically discusses revenue related to Adidas, Reebok, TaylorMade, and CCM Hockey (i.e., firm-specific terms) within their Q1 2017 earnings release.

Revenue growth in nearly all market segments

From a market segment perspective, on a currency-neutral basis, the combined sales of the adidas and Reebok brands grew in all market segments except Russia/CIS. Growth was particularly strong in North America (+31%), Greater China (+30%), Japan (+21%) and MEAA (+15%). In Western Europe and Latin America currency-neutral revenues increased 10% and 9%, respectively, despite difficult prior year comparisons resulting from the sell-in of UEFA EURO 2016 and Copa América related product. Sales in Russia/CIS declined 10% as a result of the challenging consumer sentiment as well as additional store closures. Revenues in Other Businesses were up 4% on a currency-neutral basis driven by increases in Other centrally managed businesses as well as at TaylorMade-adidas Golf. Currency-neutral CCM Hockey sales were down, reflecting sales declines in the licensed apparel business in light of the upcoming transition of the existing NHL partnership to the adidas brand as well as lower revenues in the brand's equipment business.

APPENDIX B

Sample manipulations of Channel Interactivity

More Interactive Channel:



Pre-order the new Quad Core X2 processor so something in your life doesn't slow you down. Not your average processor speed.

January 28 at 9:28am

What is your favorite ABC product?
Respond below!

- ☐ CAD 870D
- ☐ Quad Core X2
- ☐ V-Force 320CT

January 25 at 9:23am

Traffic could be costing you over \$1000 per year! That's why ABC supports telecommuting for our employees.

Check out the full review now by clicking the [link!](#)

January 22 at 9:29am



The CAD 870D 3-D printer series doesn't have a paper jams like paper printers! Get yours today!

January 19 at 9:38am

APPENDIX B (continued)

Sample manipulations of Channel Interactivity

Less Interactive Channel:



Pre-order a new Quad Core X2 processor so something in your life doesn't slow you down. Not your average processor speed.

January 28 at 9:28am

These are ABC's favorite products voted on by consumers:

- CAD 870D
- Quad Core X2
- V-Force 320CT

January 25 at 9:23am

Traffic could be costing you over \$1000 per year! That's why we support telecommuting for our employees.

*So many of us wish we could work from home. But with work-from-home scams taking the top spot for Internet crimes, we're understandably wary of such offers. Fortunately, there's a legitimate resource for such opportunities: FlexWork, an online job listings board for telecommuting, flexible schedule, part-time and freelance jobs.

Over the last year, FlexWork saw a 26 percent increase in the number of jobs posted on its site. "The positive impact remote work options can have on a company's bottom line and culture is increasingly being acknowledged by smart employers" says FlexWork founder and CEO. "In addition to employer benefits, there are a number of employee benefits such as saving \$1,120 per year in gas costs based on averaging commuting distances". With all the benefits of telecommuting, employers will have to transition the workplace culture to stay competitive financially and for top-tier employees.*

January 22 at 9:29am

The CAD 870D 3-D printer series doesn't have a paper jams like paper printers! Get yours today!

January 19 at 9:38am

APPENDIX C

Panel A: Earnings Release Example –Extremely Positive Language and Firm-Specific Terms

ABC CO. Reports Exceptional Third Quarter Sales Growth

Portland, OR – February 3, 2017 - ABC Co. (NYSE: ABC) today announced terrific results for the quarter-ended January 30, 2016. “We are amazed with our incredible third quarter results” said CEO Alex Johnson.

Compared to this quarter last year, net sales increased 3 percent to \$19.8 billion for the November-January quarter mainly due to the increase in *CAD 870D* and *V-Force 320CT* sales. Gross margin declined 2.9 percent to 52.6 percent due to higher commodity costs and manufacturing costs for products such as the *V-Force 320CT*. Earnings per share was \$1.08, an increase of half a percent. Earnings from continuing operations were \$3.02 billion, down 3 percent as costs increase and higher base-period acquisition gains.

ABC’s comparable sale highlights for third quarter were as follows:

CAD 870D: positive 9.8 percent versus positive 2.7 percent last year

V-Force 320CT: positive 8.5 percent versus negative 1.3 percent last year

Chief Executive Officer Alex Johnson stated, “Our terrific sales were above plan, in large part due to the tremendous sales of the *CAD 870D*. This superior line has been exceptionally received by the market and continues to exceed expectations. In addition, *V-Force 320CT* had amazing growth and the earnings were wonderful due to this top quality product.”

Future Outlook

Mr. Johnson concluded, “We executed several incredible initiatives during the quarter that have us extremely well positioned for the future. Our business strategy is to increase sales by expanding distribution of our superior brands, trialing our best products, and increasing purchase intent.” The Company is focused on escalating distribution of its superior products, building and maintaining exceptional relationships with its key distributors, and creating exceptional pioneering brands and products.

According to Johnson, “With the release of our new top quality *Quad Core X2* technology, we expect sales to increase significantly in the last quarter of the fiscal year. This *Quad Core X2* technology is superior to all the competition and has incredible potential in the market. We expect to have exceptional fiscal year results. ”

APPENDIX C (continued)

Panel B: Earnings Release Language Extremity Manipulations

Extremely Positive Language	Moderately Positive Language
Exceptional	Competitive
Terrific	Improved
Amazed	Encouraged
Incredible	Solid
Tremendous	Increased
Superior	Quality
Exceed Expectations	Optimistically
Wonderful	Grow
Top Quality	Healthy
Extremely Well	Better
Best	Solid
	Advantageous

Panel C: Earnings Release Term Specificity Manipulations

Firm-Specific Term	General Term
CAD 870D	Printer
V-Force 320CT	Graphic Cards
Quad Core X2	Processor

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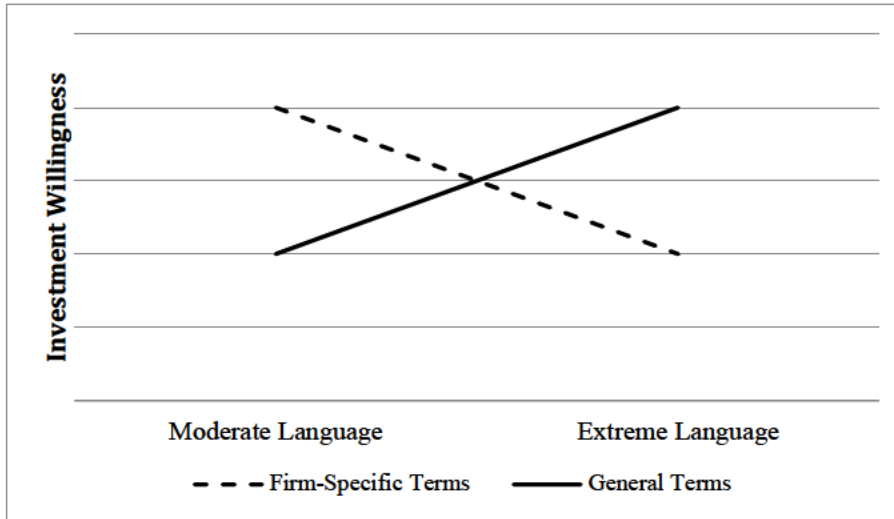
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FIGURE 1
Predicted Effects of Language Extremity and Term Specificity within More and Less Interactive Channels

Panel A: More Interactive Channel



Panel B: Less Interactive Channel

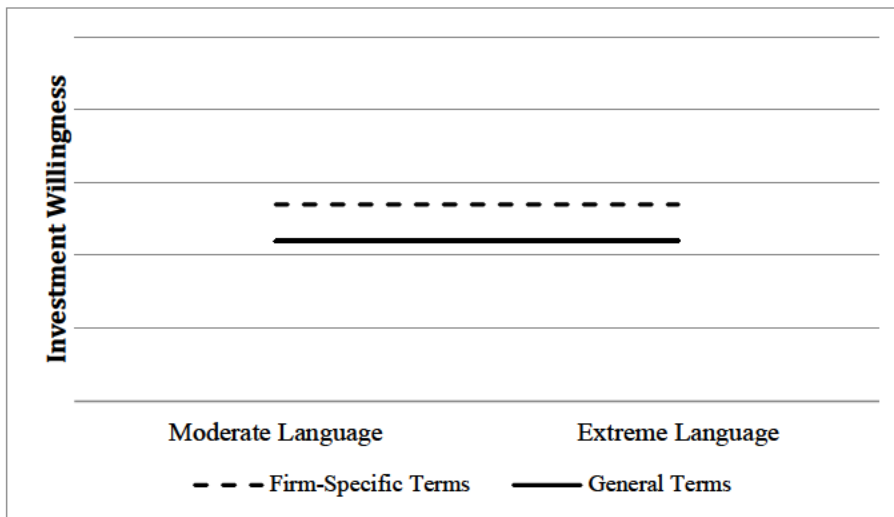
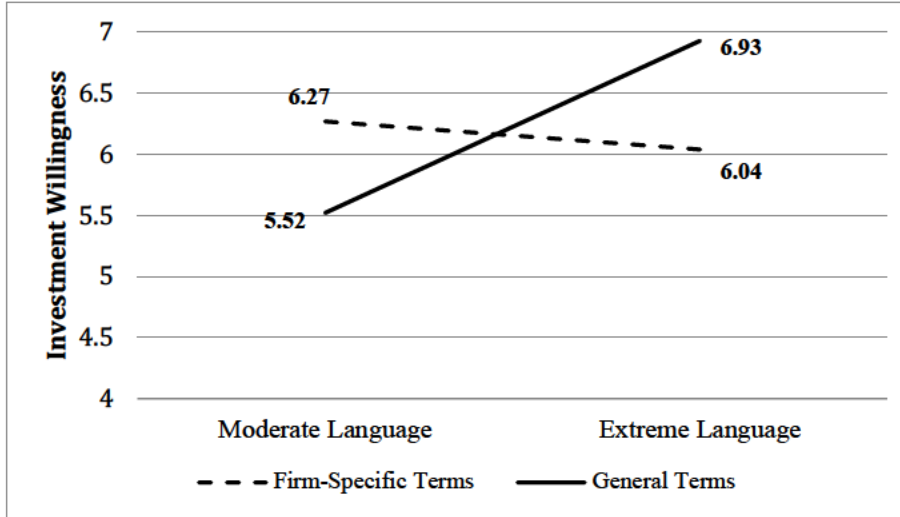


FIGURE 2
Actual Results of Language Extremity and Term Specificity within More and Less Interactive Channels

Panel A: More Interactive Channel



Panel B: Less Interactive Channel

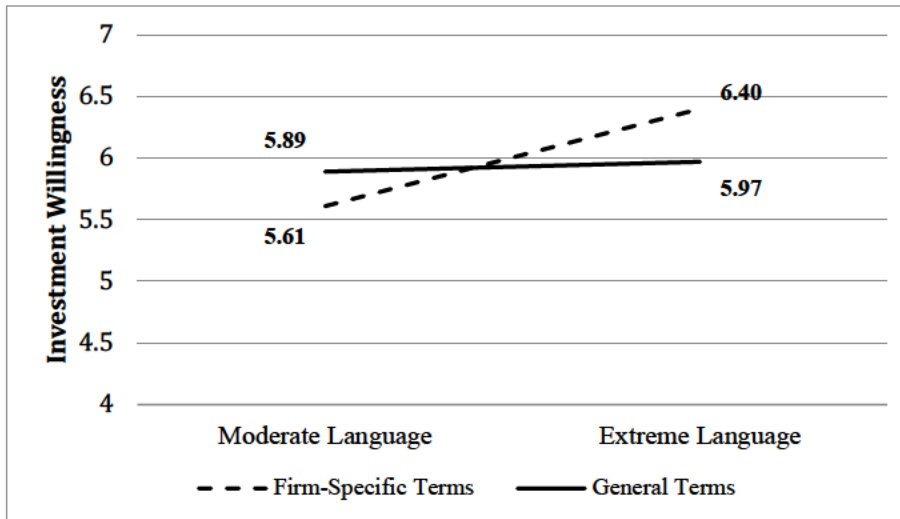
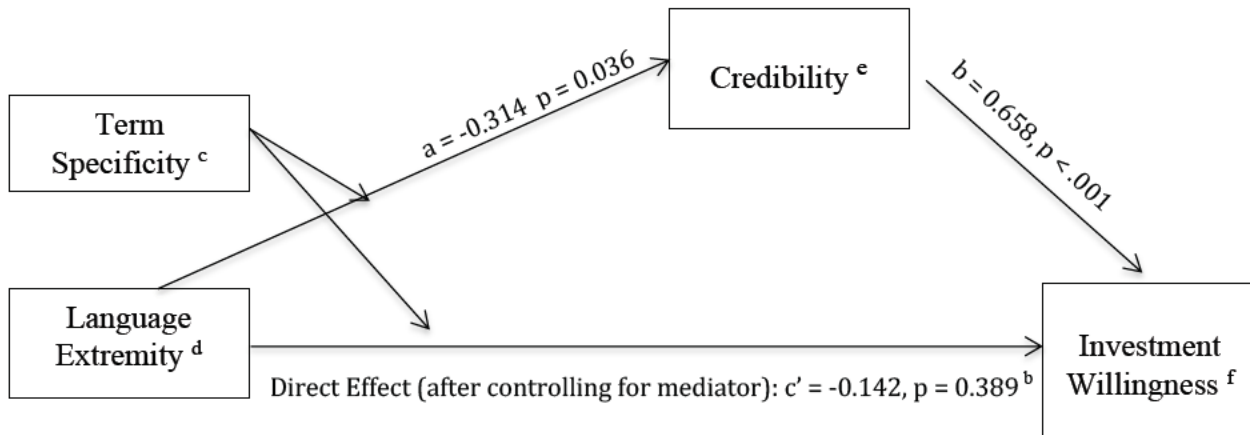


FIGURE 3
Mediation Path within More Interactive Channel^a



	Expected sign	Path estimate	One-tailed bootstrapped confidence interval
Indirect Effect			
Path from <i>Term Specificity x Language Extremity</i> through <i>Credibility</i> to <i>Investment Willingness</i>	-	-0.413	90% of bootstrapped estimates < -0.156
Indirect Effect of <i>Term Specificity</i> given moderate language condition, through <i>Credibility</i>	+	0.249	90% of bootstrapped estimates > 0.032
Indirect Effect of <i>Term Specificity</i> given extreme language condition, through <i>Credibility</i>	-	-0.164	90% of bootstrapped estimates < -0.008

Notes:

^a All p-values are one-tailed, unless otherwise noted.

^b As this figure shows, the effect of *Term Specificity x Language Extremity* interaction on *Investment Willingness* within more channel interactivity (Table 2) is fully mediated by *credibility*. Specifically, the total effect (i.e., not controlling for the mediator) of the interaction on *Investment Willingness* is statistically significant ($p = 0.040$, Table 2 Panel A), which the remaining direct effect (c') is insignificant after controlling for the mediator ($p = 0.389$, two-tailed). Additionally, the two direct effects become insignificant after controlling for the mediator. Specifically, in the moderate condition $p = 0.755$, two-tailed, and in the extreme condition $p = 0.358$, two-tailed. These results are consistent with full mediation.

^c *Term Specificity* is coded using effects coding (cf. Little, Slegers, and Card 2006), and equals +1 for participants in the firm-specific terms condition, -1 otherwise (i.e., general terms condition).

^d *Language Extremity* is coded using effects coding, and equals +1 for participants in the extremely positive language condition, -1 otherwise (i.e., moderately positive language condition).

^e *Credibility* is a composite variable using two measured variables: participants' perceptions of the trustworthiness and competence in management.

^f *Investment Willingness* is the likelihood participants were willing to invest in the firm.

TABLE 1
Analysis of Participants' Investment Willingness

Panel A: Descriptive Statistics: Mean (Standard Deviations)

Term Specificity	More Interactive Channel		Less Interactive Channel	
	Firm-Specific	General	Firm-Specific	General
Moderate Language	6.27 (2.01) n=26	5.52 (2.44) n=29	5.61 (2.00) n=28	5.89 (2.10) n=27
Extreme Language	6.04 (1.93) n=27	6.93 (1.88) n=29	6.40 (1.83) n=30	5.97 (2.02) n=31

Panel B: Three-way ANOVA Results

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Interactivity	2.806	1	2.806	0.676	0.412
Specificity	0.000	1	0.000	0.000	0.994
Extremity	14.908	1	14.908	3.593	0.059
Interactivity x Specificity	0.303	1	0.303	0.073	0.787
Interactivity x Extremity	0.340	1	0.340	0.082	0.775
Specificity x Extremity	3.071	1	3.071	0.740	0.391
Interactivity x Specificity x Extremity	19.694	1	19.694	4.746	0.030
Error	908.695	219	4.149		

Participants are asked to indicate "[t]o what extent are you willing to invest in ABC's stock" on an 11-point scale, with endpoints 0 = "Not at all Willing" and 10 = "Very Willing."

TABLE 2
More Interactive Channel
Participants' Investment Willingness

Panel A: ANOVA Results

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Specificity	0.140	1	0.140	0.032	0.858
Extremity	9.665	1	9.665	2.223	0.139
Specificity x Extremity	18.754	1	18.754	4.314	0.040
Error	465.182	107	4.347		

Panel B: Interaction Contrast^a

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Specificity x Extremity	18.754	1	18.754	4.520	0.035

Panel C: Term Specificity

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Moderate Language: Firm-Specific > General	7.752	1	7.752	1.868	0.087*
Extreme Language: General > Firm-Specific	11.175	1	11.175	2.693	0.051*

Panel D: Language Extremity

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Firm-Specific: Moderate vs. Extreme Language	0.714	1	0.714	0.172	0.679
General: Moderate vs. Extreme Language	28.983	1	28.983	6.985	0.009

Participants are asked to indicate "[t]o what extent are you willing to invest in ABC's stock" on an 11-point scale, with endpoints 0 = "Not at all Willing" and 10 = "Very Willing."

* One-tailed equivalent p-value reflects directional predictions.

^a We also test the interaction of *term specificity x language extremity* in the more interactive condition using a contrast test with all eight cells. Using the traditional ANOVA interaction term weights, we assign contrast weights of (1, -1, -1, 1) to the following conditions within the more interactive condition: firm-specific and moderate, general and moderate, firm-specific and extreme, and general and extreme, respectively. Additionally, we assign zero weights to the less interactive condition.

TABLE 3
Less Interactive Channel
Participants' Investment Willingness

Panel A: ANOVA Results

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Specificity	0.164	1	0.164	0.041	0.839
Extremity	5.493	1	5.493	1.387	0.241
Specificity x Extremity	3.685	1	3.685	0.931	0.337
Error	443.513	112	3.960		

Panel B: Interaction Contrast ^a

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Specificity x Extremity	3.685	1	3.685	0.888	0.347

Panel C: Term Specificity

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Moderate Language: Firm-Specific > General	1.091	1	1.091	0.263	0.609
Extreme Language: General > Firm-Specific	2.849	1	2.849	0.687	0.408

Panel D: Language Extremity

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Firm-Specific: Moderate vs. Extreme Language	9.104	1	9.104	2.194	0.140
General: Moderate vs. Extreme Language	0.090	1	0.090	0.022	0.883

Participants are asked to indicate “[t]o what extent are you willing to invest in ABC’s stock” on an 11-point scale, with endpoints 0 = “Not at all Willing” and 10 = “Very Willing.”

^a We also test the interaction of *term specificity x language extremity* in the less interactive condition using a contrast test with all eight cells. Using the traditional ANOVA interaction term weights, we assign contrast weights of (1, -1, -1, 1) to the following conditions within the less interactive condition: firm-specific and moderate, general and moderate, firm-specific and extreme, and general and extreme, respectively. Additionally, we assign zero weights to the more interactive condition.

TABLE 4
Analysis of Participants' Management Credibility Assessments

Panel A: Descriptive Statistics: Mean (Standard Deviations)

Term Specificity	More Interactive Channel		Less Interactive Channel	
	Firm-Specific	General	Firm-Specific	General
Moderate Language	6.98 (2.06) n=25	6.22 (2.04) n=29	6.96 (1.56) n=28	6.46 (1.61) n=27
Extreme Language	6.54 (1.51) n=27	7.04 (1.51) n=28	6.47 (1.78) n=30	5.63 (1.89) n=31

Panel B: Three-way ANOVA Results

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Interactivity	5.506	1	5.506	1.778	0.184
Specificity	8.921	1	8.921	2.881	0.091
Extremity	3.247	1	3.247	1.049	0.307
Interactivity x Specificity	4.098	1	4.098	1.324	0.251
Interactivity x Extremity	10.122	1	10.122	3.269	0.072
Specificity x Extremity	2.952	1	2.952	0.954	0.330
Interactivity x Specificity x Extremity	8.862	1	8.862	2.862	0.092
Error	671.838	217	3.096		

Panel C: More Interactive Channel

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Specificity x Extremity ^a	10.690	1	10.690	3.453	0.065

Panel D: Less Interactive Channel

Source	Sum of Squares	df	Mean Square	F-stat	p-value
Specificity and Extremity ^a	0.818	1	0.818	0.264	0.608

Participants are asked to assess management's competence and trustworthiness, on 11-point scales. Both questions are coded with "-5" indicating "not at all competent/trustworthy" and "5" indicating "very competent/trustworthy."

^a We test the interaction of *term specificity x language extremity* in the level of interactivity of interest using a contrast test with all eight cells. Using the traditional ANOVA interaction term weights, we assign contrast weights of (1, -1, -1, 1) to the following conditions within the level of interactivity of interest: firm-specific and moderate, general and moderate, firm-specific and extreme, and general and extreme, respectively. Additionally, we assign zero weights to the other level of interactivity.